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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,902	11/24/2003	Alan L. Billings	930034-2041	5301

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EXAMINER	
WARD, JESSICA LEE	
ART UNIT	PAPER NUMBER
1791	
MAIL DATE	DELIVERY MODE
10/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	Application No.	Applicant(s)	
	10/720,902	BILLINGS ET AL.	
	Examiner	Art Unit	
	Jessica L. Ward	1791	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 18 September 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires *3* months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *1-6,8 and 16-23*.
   Claim(s) withdrawn from consideration: *7 and 9-15*.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: SEE ATTACHED SHEET.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

Jessica L. Ward
Primary Examiner
Division 1791

ADVISORY ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 8 and 16-23 stand rejected under 35 U.S.C. 102(b) as being anticipated by Wicker (US 3368933, previously cited).

Wicker teaches a belt 137, capable of being a single facer corrugator belt, in combination with a corrugated paper board machine (column 1, lines 8-10). The belt comprises:

- base structure 135 having an inside and an outside surface that contacts paper board and being formed by machine direction yarns and cross-machine direction yarns (Figure 16; column 10, lines 24-30)
- polymeric resin coating 136 (***sheet 136 equated to Applicant's "coating" – see dictionary definition of coating and list of synonyms attached to present office action***) applied on the outside surface of the base structure (Figure 16; column 10, lines 24-30), and
- plurality of grooves 84a formed in the polymeric resin sheet/coating 136 (Figure 6; column 8, lines 39-61; column 10, lines 68-74).

As for the plurality of grooves aiding in improved paper board release and increased rate of board moisture removal, this is a function of the grooves and not a structural limitation. While features of an apparatus may be recited either structurally or functionally, claims directed

to an apparatus must be distinguished from the prior art in terms of structure rather than function (MPEP 2114). Furthermore, the material worked upon (paper board) by the apparatus and the manner by which the apparatus cooperates with the material worked upon (aiding in improved board release and increased rate of board moisture removal) does not further limit the scope of an apparatus claim (MPEP 2115). However, the grooves of Wicker would be capable of aiding in improved board release and increased rate of board moisture removal. And although it is irrelevant, the Examiner would like to point out that Wicker expressly teaches the grooves aiding in improved board release (column 8, lines 47-49 and 53-61).

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-6, 8 and 16-23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Welch et al. (US 5857605, previously cited) in view Wicker.

Welch teaches a belt 46, capable of being a single facer corrugator belt, in combination with a corrugated paper board machine comprising:

- base structure formed by fabric plies 119-121 having an inside and an outside surface that contacts paper board (Figure 11; column 5, lines 35-40)
- polymeric resin coating 123 (***cover 123 equated to Applicant's "coating" – see dictionary definition of coating and list of synonyms attached to present office action***) applied on the outside surface of the base structure (Figure 11; column 5, lines 40-44), and

- plurality of grooves 105 formed in the polymeric resin cover 123 (Figure 11; column 4, lines 20-23).

As for the plurality of grooves aiding in improved board release and increased rate of board moisture removal, this is a function of the grooves and not a structural limitation. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function (MPEP 2114). Furthermore, the material worked upon (board) by the apparatus and the manner by which the apparatus cooperates with the material worked upon (aiding in improved board release and increased rate of board moisture removal) does not further limit the scope of an apparatus claim (MPEP 2115). However, the grooves of Welch would be capable of aiding in improved board release and increased rate of board moisture removal.

It is unclear as to whether the reference teaches the fabric plies of the base structure having machine and cross machine direction yarns. One reading Welch would have readily appreciated that the reference is not concerned with a particular type of fabric (i.e. non-woven, woven, etc.) for the base structure. Therefore, selection of a particular type of fabric would have been within purview of one having ordinary skill in the art. However, it would have been obvious to use a woven fabric, and hence a fabric that inherently has machine and cross machine direction yarns, for the base structure because such is well known and conventional in the art, as taught by Wicker (see above for complete discussion).

8. Claims 1-6, 8 and 16-23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Billings et al. (US 6470944, previously cited) in view of Hansen (US 2002/0102894, previously cited) and further in view of McGahern et al. (US 6428874, previously cited).

With respect to claim 1, Billings teaches a single facer corrugator belt 40 in combination with a corrugated paper board machine comprising:

- base structure 52 having an inside and an outside surface that contacts paper board and being formed by machine direction yarns 56 and cross-machine direction yarns 54, and
- polymeric resin coating 66 applied on the outside surface of the base structure (Figure 2; abstract; column 3, lines 10-18; column 4, lines 43-48; in fact, Billings teaches coating **and** impregnating the base structure with the resin so that **complete impregnation of the base structure** takes place because complete impregnation of the base structure, **in addition** to forming a distinct resin layer on the outside surface of the base structure, improves the integrity and durability of the belt).

It is unclear as to whether Billings teachings a plurality of grooves formed in the polymeric resin coating.

It is known in the art to make a belt, which can be used as a **long nip press belt in a paper machine or a corrugator belt in a corrugator machine**, having a base structure formed by yarns where grooves are provided in the yarns for temporarily storing water that is removed from the material as it is conveyed on the base structure, as taught by Hansen (sections [0015, 0021, 0052]). But unlike Billings, Hansen does not teach coating/impregnating the base structure with a resin.

However, it is known in the art to make a **long nip press belt for a paper machine** having a base structure formed by yarns and a polymeric resin layer that coats/impregnates the base structure where a plurality of grooves are formed in the resin for temporarily storing water

that is removed from the material as it is conveyed on the base structure, as taught by McGahern (Figure 3; abstract; column 2, lines 61-62; column 4, lines 45-47; column 5, lines 20-22).

Therefore, it would have been obvious to one of ordinary skill in the art to make the corrugator belt of Billings capable of temporarily storing water that is removed from the material as it is conveyed on the base structure because such is known in the corrugator belt art, as taught by Hansen; however, the manner by which Hansen achieves this capability (grooves in yarns) would not be suited to the base structure of Billings whose base structure is completely coated/impregnated with resin. Therefore, it would have been obvious to one having ordinary skill in the art to further look to the teachings of McGahern, who achieves the same capability in a base structure that is completely coated/impregnated with resin by forming grooves in the resin, for motivation to provide grooves in the resin layer of Billings, especially since Hansen teaches it being known to use the same base structure as a long nip press belt in a paper machine or as a corrugator belt in a corrugator machine.

As for the plurality of grooves aiding in improved board release and increased rate of board moisture removal, this is a function of the grooves and not a structural limitation. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function (MPEP 2114). Furthermore, the material worked upon (board) by the apparatus and the manner by which the apparatus cooperates with the material worked upon (aiding in improved board release and increased rate of board moisture removal) does not further limit the scope of an apparatus claim (MPEP 2115). However, the grooves of Billings, as modified, would be capable of aiding in improved board release and increased rate of board moisture removal.

Double Patenting

9. The obviousness-type double patenting rejection of the present claims, as set forth in all previous actions, stands.

Response to Arguments

10. Applicant's arguments filed 4/12/07 have been fully considered but they are not persuasive.

A.

Applicant argues that Wicker teaches a sheet (136) of Mylar polyester film to form belt (137) and the assembled structure is held in place by suitable adhesive (base structure 135 is adhesively bonded to film 136 to form belt 137 – column 10, lines 24-30). Applicant argues that this is in contrast to the present invention, where a polymeric resin coating is applied on the outside surface of the base structure, because this means the instant coating inherently adheres to the substrate without any use of additional adhesives. Applicant argues that the present coating can do this because it is a liquid polymer resin coating in its real sense and not a separate Mylar sheet as suggested by Wicker.

Applicant's arguments are not commensurate with the scope of the claimed invention. Instead, Applicant appears to be reading limitations from the present specification into the claims thereby resulting in an extremely narrow interpretation of the word coating. The Examiner reminds Applicant that claims must be given their broadest most reasonable interpretation and while claims are read in light of the specification, limitations from the specification are not read into the claims (MPEP 2111). The dictionary defines a coating as a covering and lists layer and sheet as synonyms for coating; therefore, one would readily appreciate that the Mylar film of

Wicker is equivalent to Applicant's claimed coating. Applicant is grossly incorrect in assuming that the word coating limits the claims to a liquid coating that adheres to a substrate without additional adhesive.

B.

Applicant argues that Welch teaches a rubber cover (123) and therefore does not teach or suggest a coating for the same reasons given above with respect to Wicker.

Once again, Applicant's arguments are not commensurate with the scope of the claimed invention. Instead, Applicant appears to be reading limitations from the present specification into the claims thereby resulting in an extremely narrow interpretation of the word coating. The Examiner reminds Applicant that claims must be given their broadest most reasonable interpretation and while claims are read in light of the specification, limitations from the specification are not read into the claims (MPEP 2111). The dictionary defines a coating as a covering and lists layer and sheet as synonyms for coating; therefore, one would readily appreciate that the rubber cover of Welch is equivalent to Applicant's coating. Applicant is grossly incorrect in assuming that the word coating limits the claims to a liquid coating that adheres to a substrate without additional adhesive.

Applicant argues that Welch does not teach or suggest "woven" fabrics with yarns in the CD or MD and although the Examiner argues that this feature would be obvious in view of Wicker, the use of plies teaches away from the instant invention because they do not increase rate of board moisture removal, as recited in the instant claims. Applicant submits that the use of multiple fabric plies in Welch obstructs the hot, moisture laden air from entering the structure

and therefore does not allow the carriage of the moisture laden air to escape to the atmosphere when outside the nip.

The Examiner points out that Applicant's argument is moot given the fact that the present invention discloses the use of multiple layers for the base structure (p. 8, lines 16-18).

C.

Applicant argues that the Examiner looks to Hansen for grooves, but there is nothing in Hansen to indicate that his yarn would be the sheet contacting surface of a corrugator belt. Applicant argues that the yarn of Hansen is meant to be a reinforcing structure for belts such as corrugator belts and there is no teaching in Hansen for using such yarns, grooved or perforated, in a corrugator belt.

Firstly, the Examiner points out that the outer surface of Applicant's claimed base structure has a resin coating thereon. This resin coating, and not the base structure, would be the sheet-contacting surface of Applicant's corrugator belt. Secondly, Hansen teaches the fabric, which is made from the yarns, conveying water away from the material conveyed thereon (section [0052]). Thirdly, Hansen does teach using the fabric in a corrugator belt (section [0015]). Regardless, the Examiner's rejection relies on Hansen solely as a teaching that it is known in the art to use the same fabric as a base structure for both a paper-processing belt and a corrugator belt, where both of these industrial settings use the fabric to remove and temporarily store water from the material that is conveyed thereon.

Applicant argues that McGahern is directed to a resin-impregnated belt with a grooved surface but the belt is for a long nip press or calendar of a shoe type and the grooves are intended to provide spaces to separate the liquid phase moisture that is pressed from the sheet/press fabric.

The instant invention, on the contrary, relates to a single facer corrugator belt in combination with a corrugator machine that is specifically designed to allow moisture vapor that comes from the heated board to pass out of the facer zone and into the belt. There is no motivation for a worker in the corrugator belt art to look into paper making belts to solve the problem addressed by the present invention.

Once again, the Examiner points out that McGahern was only used to show it being known in the art to make a resin coated and impregnated belt capable of temporarily storing water that is removed from the material in contact therewith by *forming grooves in the resin.* The examiner acknowledged that McGahern only talks about using his belt as a long nip press belt in a paper machine and that is why the reference to Hansen was cited to show it being known in the art to use a base structure, which is capable of temporarily storing water that is removed from the material conveyed thereon, as part of a belt for both a long nip press belt in a paper machine and a corrugator belt in a corrugator machine. Simply stated, Hansen was the link used to connect the Billings and McGahern references. As stated in the rejection:

> ..."it would have been obvious to one of ordinary skill in the art to make the corrugator belt of Billings capable of temporarily storing water that is removed from the material as it is conveyed on the base structure because such is known in the corrugator belt art, as taught by Hansen; however, the manner by which Hansen achieves this capability (grooves in yarns) would not be suited to the base structure of Billings whose base structure is completely coated/impregnated with resin. Therefore, it would have been obvious to one having ordinary skill in the art to further look to the teachings of McGahern, who achieves the same capability in a base structure that is completely coated/impregnated with resin by forming grooves in the resin, for motivation to provide grooves in the resin layer of Billings, especially since Hansen teaches it being known to use the same base structure as a long nip press belt in a paper machine or as a corrugator belt in a corrugator machine."

Applicant also argues that the instant invention, contrary to McGahern, relates to a single facer corrugator belt in combination with a corrugator machine that is specifically designed to allow moisture vapor that comes from the heated board to pass out of the facer zone into the belt.

The examiner reminds Applicant that this is a *function* of the corrugator belt and not a *structural* limitation. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function (MPEP 2114). Furthermore, the Examiner points out that the material worked upon by the apparatus and the manner by which the apparatus cooperates with the material worked upon does not further limit the scope of an apparatus claim (MPEP 2115). However, the grooves of Billings, as modified in view of Hansen and McGahern, would be capable of allowing moisture vapor that comes from the heated board to pass out of the facer zone and into the belt.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica L. Ward whose telephone number is 571-272-1223. The examiner can normally be reached on Mon-Fri between 9AM and 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard D. Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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